

MAIN STREET CONSULTING COMPANY

DRAINAGE REPORT

April 16, 2015

by:

Main Street Consulting Company
Project Number 15.016

for:

City of Franklin

Project:

Davenport Minor Subdivision



A handwritten signature in black ink that reads "Bradley P. Ott".

Bradley P. Ott, PLS, PE
Main Street Consulting Company

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PROJECT LOCATION AND DESCRIPTION:

The proposed 2 (two) lot minor subdivision will be located on the existing 23.8 acre property located at 242 Fairway Court, Franklin, Indiana 46131.

The site is located entirely in flood zone designation "Zone X" as shown on the Flood Insurance Rate Map number 18081C0232D dated August 2, 2007.

There are NO proposed improvements associated with this project. The desire of the landowner is to simply sell off Lot one with the existing residence.

The purpose of this report is to indicate that in the newly-platted state the site will have no adverse impacts on downstream owners.

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EXISTING DRAINAGE CONDITIONS:

This project is located on an existing 23.5 acre site. The property falls from a high elevation of 778 feet near the existing residence to a low elevation of 738 along the west property line. Time of concentration utilized for the rainfall intensity analysis for this report is 30 minutes (1/2 hour).

Rainfall Depth @ 24 hour duration	2-Year (in)	10-Year (in)	100-Year (in)
24 Hour	2.64	4.08	6.00

Rainfall Intensities @ ½ hour duration	2-Year (in/hr)	10-Year (in/hr)	100-Year (in/hr)
24 Hour	1.98	3.09	4.50

PRE- Development Urban Runoff Coefficients	"C"	Area (acres)
Cult. Row Crops	0.50	16.5
Impervious	0.90	0.14
Lawn	0.20	3
Woodlands	0.15	3
Existing Pond	0.90	0.86
Composite	0.43	23.5

PRE-Development discharge rates	2-Year (cfs)	10-Year (cfs)	100-Year (cfs)
$Q = C i A$	20.0	31.2	45.5

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PROPOSED DRAINAGE CONDITIONS:

The proposed future impervious surface and lawn conversions from the existing cultivated row crop condition the proposed new lots will impact the future flow rates as indicated herein.

Rainfall Depth @ 24 hour duration	2-Year (in)	10-Year (in)	100-Year (in)
24 Hour	2.64	4.08	6.00

Rainfall Intensities @ ½ hour duration	2-Year (in/hr)	10-Year (in/hr)	100-Year (in/hr)
24 Hour	1.98	3.09	4.50

POST- Development Urban Runoff Coefficients	"C"	Area (acres)
Cult. Row Crops	0.50	16.5
Impervious	0.90	0.14
Lawn	0.20	3
Woodlands	0.15	3
Existing Pond	0.90	0.86
Composite	0.43	23.5

POST-Development discharge rates	2-Year (cfs)	10-Year (cfs)	100-Year (cfs)
Q = C i A	20.0	31.2	45.5

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CONCLUSION:

The proposed future improvements to the Lot 2 portion of this property will require further drainage analysis at that future later date once those actual improvements can be contemplated in specific detail in order to ensure proper drainage by continuing to convey surface storm water along current flow paths to maintain consistent flow patterns.

As indicated by the calculations provided there is no net change of flow rates from the site due to this proposed platting project. As a result there are no anticipated adverse impacts on downstream property owners.